

- .7 CABLE FAIL SAFE DEVICE.
- .1 ABLE TO STOP DOOR IMMEDIATELY IF CABLE BREAKS ON DOOR FREE FALL BRAKING CAPACITY 500 KG.
- .8 DOOR SPEED: 300 MM PER SECOND.
- .9 CONTROL TRANSFORMER: FOR 24 VAC CONTROL VOLTAGE.
- .10 MOUNTING BRACKETS: GALVANIZED STEEL, SIZE AND GAUGE TO SUIT CONDITIONS.
- .13 DOCK SEALS: AS INDICATED ON DOOR SCHEDULE
- .14 DOCK BUMPER: AS INDICATED ON DOOR SCHEDULE.

1. INSTALLATION:
- .1INSTALL WORK PLUMB, SQUARE, LEVEL, FREE FROM WARP, TWIST AND SUPERIMPOSED LOADS.
 - .2SECURE WORK IN REQUIRED POSITION. DO NOT RESTRICT THERMAL MOVEMENT.
 - .3INSTALL HARDWARE IN ACCORDANCE WITH TEMPLATES.
 - .4ADJUST OPERABLE PARTS FOR FUNCTION
 - .5WARRANTY: 12 MONTHS PARTS AND LABOUR FROM COMPLETION OF DOOR INSTALLATION.
 - .6MANUAL DOOR OPERATION (DOORS 10X10 AND UNDER OR 100SQ. FT.)
 - .1 MANUAL PUSH UP OPERATION.
 - .7MANUAL DOOR OPERATION (DOORS 10X12, 12X12, AND 12X14)
 - .1 CHAIN HOIST: SIDE MOUNTED UNIT COMPLETE WITH HOT DIP GALVANIZED CONTINUOUS STEEL CHAIN. GEAR REDUCTION OF 3:1.
 - .2MOUNT CHAIN HOIST @ "DRIVER'S SIDE" OF ALL BAY DOORS. UNLESS SHOWN OTHERWISE

08 71 00 – DOOR HARDWARE

- 1. GENERAL
 - 1. READ DRAWINGS IN CONJUNCTION WITH SPECIFICATIONS FOR DOOR HARDWARE REQUIREMENTS.
 - 2. SUBMIT SHOP DRAWINGS FOR DOOR HARDWARE. INCLUDE CUT SHEETS.
 - 3. PROVIDE OPERATION AND MAINTENANCE DATA FOR ALL HARDWARE FOR INCORPORATION INTO OWNERS MANUAL
 - 4. USE ONE MANUFACTURER'S PRODUCTS ONLY FOR ALL SIMILAR ITEMS.
 - 5. ALL HARDWARE SCHEDULED SHALL BE COMMERCIAL GRADE 626, GRADE-1 FINISH. TYPICAL UNLESS NOTED OTHERWISE.
 - 6. KEYING INFORMATION TO BE PROVIDED BY OWNER. LOCKS TO HAVE PROVISION FOR MASTER KEY SYSTEM, COORDINATE W/ OWNER. CONFIRM ALL KEYING AND HARDWARE FUNCTIONS WITH OWNER PRIOR TO ORDERING AND INSTALLATION. OWNER TO PROVIDE KEY GROUP INFORMATION.
 - .1PROVIDE FACTORY PREPARED KEYING TO 6 PIN SYSTEM. MASTER KEY TO BE PREPARED AND PROVIDED AT THE COMPLETION OF THE PROJECT.
 - .2PROVIDE KEY CONTROL SYSTEM (LOCKABLE CABINET) TO ORGANIZE AND STORE KEYS
 - .3CONTRACTOR TO USE CONSTRUCTION KEYS UNTIL TURN OVER OF PROJECT.
 - 7. HARDWARE FOR DOORS IN FIRE SEPARATIONS AND EXIT DOORS CERTIFIED BY A CANADIAN CERTIFICATION ORGANIZATION ACCREDITED BY STANDARDS COUNCIL OF CANADA.
 - 8. BARRIER FREE PATHWAYS TO CONFORM WITH ALL LOCAL APPLICABLE CODES AND REGULATIONS.
 - 9. COMPLIANCE: COMPLY WITH MANUFACTURER'S WRITTEN DATA, INCLUDING PRODUCT TECHNICAL BULLETINS, PRODUCT CATALOGUE INSTALLATION INSTRUCTIONS, PRODUCT CARTON INSTALLATION INSTRUCTIONS, AND DATA SHEETS.
 - 10. VERIFY THAT DOOR AND FRAME COMPONENTS ARE READY TO RECEIVE HARDWARE AND THAT THE DIMENSIONS ARE AS INDICATED ON THE DRAWINGS. VERIFY THAT POWER IS PRESENT FOR OPERATION OF ELECTRONIC HARDWARE.
 - 11. INSTALLER IS RESPONSIBLE FOR ENSURING PROPER OPERATION OF DOORS AND HARDWARE. E.G. SMOOTH OPENING AND CLOSING OF DOOR, POSITIVE LATCHING AND SMOOTH CYCLING OF LOCK LEVERS, PROPER INSTALLATION AND ADJUSTMENT OF DOOR CLOSERS.
 - 12. STANDARD HARDWARE HEIGHTS SHOULD BE AS PER CSDMA RECOMMENDATIONS AND NATIONAL BUILDING CODE COMPLIANCE.
 - 13. SUBMIT A HARDWARE SCHEDULE SHOWING QUANTITY, TYPE AND LOCATION OF ALL ITEMS FINISH HARDWARE TO BE SUPPLIED FOR EACH DOOR SHOWN ON THE DOOR SCHEDULE.
 - 14. AFTER COMPLETION OF ALL CONSTRUCTION WORK, CERTIFY ALL ITEMS OF HARDWARE HAVE BEEN ADJUSTED AND ARE WORKING PROPERLY AND THAT ALL HARDWARE ON FIRE RATED (LABELED) DOORS CONFORM TO THE REQUIREMENTS OF THE UNDERWRITERS LABORATORIES OF CANADA AND ALL OTHER APPLICABLE CODES.

2. MATERIALS
- 1. BUTT HINGES:
 - .1TO ANSI/BHMA A156.1, DESIGNATED BY LETTER "A" AND NUMERAL IDENTIFIERS, FOLLOWED BY SIZE AND FINISH, LISTED IN HARDWARE SCHEDULE.
 - .2BALLBEARING TYPE, PIVOT HINGES ARE NOT ACCEPTABLE.
 - .3PROVIDE STAINLESS STEEL HINGES FOR ALL EXTERIOR DOORS. INTERIOR BUTTS STEEL PLATED.
 - .1TYPE A1: HAGER BB1168, 41/2X41/2 NRP, 626 FINISH
 - .2TYPE A2: HAGER BB1279 41/2X4, 626 FINISH
 - 2. CYLINDRICAL LOCKS AND LATCHES TO: ANSI/BHMA A156.13, GRADE DESIGNED FOR FUNCTION AS STATES IN HARDWARE SCHEDULE.
 - .1MANUFACTURER: YALE 5400LN SERIES, GRADE 1, 626 SATIN CHROME PLATED, AU LEVER TRIM, ALTERNATIVE OR EQUIVALENT SUBJECT FOR REVIEW AND APPROVAL BY CONSULTANT.
 - .2COME WITH TWO (2) KEYS PER LOCKSET. CYLINDERS KEY INTO MASTER KEYING SYSTEM AS DIRECTED.
 - .3PROVIDE A DEADLOCKING LATCHBOLTS.
 - .4PROVIDE CONVENTIONAL 6 PIN OR 7 PIN CYLINDER MECHANISM.

- 3. EXIT DEVICE:
 - ED01: AS PER YALE 7150, C/W
- 4. DOOR CLOSERS:
 - .1TO ANSI/BHMA A156.4, LISTED IN HARDWARE SCHEDULE, SIZE IN ACCORDANCE WITH ANSI/BHMA A156.4, TABLE A1.
 - .2PRODUCT: LCN 4040 XP EDA, OR EQUAL, SUBJECT FOR REVIEW AND APPROVAL BY CONSULTANT.
 - .3WOOD DOOR APPLICATIONS DOOR CLOSERS ARE TO BE THROUGH-BOLTED.
 - .4PROVIDE ALL BRACKETS AND EXTENSION ARMS AS REQUIRED TO SUIT APPLICATION.
- 5. DOOR STOPS: IN ACCORDANCE WITH ANSI/BHMA A156.16, AND A156.8 DESIGNATED BY LETTER "K" AND NUMERAL IDENTIFIERS LISTED IN HARDWARE SCHEDULE:
 - K1. L02141/L02161 FLOOR TYPE.
 - K2. L02251 WALL TYPE (CONCAVE).
 - K3. C02541 (A156.8) OVERHEAD TYPE

- 6. KICKPLATES: TO ANSI/BHMA A156.6, LISTED IN HARDWARE SCHEDULE. 0.050" (1.3 MM) THICK ALUMINUM RECTANGULAR KICKPLATE WITH SQUARE CORNERS AND BEVELED EDGES (4 SIDES) – 15/8" LESS THAN WIDTH OF DOOR ON STOP SIDE. MOUNT BOTTOM OF KICKPLATE 1/8" ABOVE BOTTOM OF DOOR. 1 SIDE 10" HIGH.
- 7. PUSHES AND PULLS: TO ANSI/BHMA A156.6, DESIGNATED BY LETTER J AND NUMERAL IDENTIFIERS LISTED IN HARDWARE SCHEDULE.
 - J1. PUSH/PULL SET: 1" DIAMETER, 12" LONG PULL TYPE J401, COMPLETE WITH 6" X 16" BACK PLATE TYPE J405, ALL STAINLESS STEEL X 630.
 - J2. PUSH PLATE: 6" X 16" TYPE J301 RECTANGULAR PUSH PLATE WITH SQUARE CORNERS AND BEVELED EDGES, STAINLESS STEEL X 630
- 8. THRESHOLDS: IN ACCORDANCE WITH ANSI/BHMA A156.21:
 - .1PROVIDE THRESHOLD J32100, FLUTED TOP AT INTERIOR LOCATIONS SCHEDULED. WIDTH TO MATCH ADJACENT PRESSED STEEL FRAME.
 - .2PROVIDE THRESHOLD J32190, THERMAL BREAK AND FLUTED TOP AT EXTERIOR LOCATIONS SCHEDULED. WIDTH TO MATCH ADJACENT PRESSED STEEL FRAME.
- 9. WEATHERSTRIPPING: IN ACCORDANCE WITH ANSI/BHMA A156.22.: HEAD AND JAMB: R3C164/5, NOMINAL 6 X 40 MM; DOOR SILLS: R3B414/5, NOMINAL 6 X 45 MM;
- 10. DOOR BUMPER (TO BE INCLUDED ON ALL DOORS): L03011, STANDARD RESILIENT TYPE RUBBER; PLACE MINIMUM OF 3 SINGLE BUMPERS ON SINGLE DOOR FRAMES. SPACE EQUALLY ALONG STRIKE JAMBS.
- 11. ACCESSORIES: TO ANSI/BHMA A156.16, DESIGNATED BY LETTER L AND NUMERAL IDENTIFIERS, AS LISTED IN HARDWARE SCHEDULE:
 - .1'L1' – DOOR OPERATORS: POWER-OPERATED PEDESTRIAN DOORS: TO ANSI/BHMA A156.10.
 - .1AUTOMATIC CLOSER/OPERATOR SHALL OPEN DOOR BY ENERGIZING MOTOR AND SHALL STOP BY STALLING MOTOR AGAINST MECHANICAL STOP.
 - .2DOOR SHALL CLOSE SLOWLY BY MEANS OF SPRING ENERGY, CLOSING FORCE SHALL BE CONTROLLED BY HYDRAULIC CLOSER INDEPENDENT OF THE MOTOR AND ELECTRIC CONTROL. CLOSING SPEED SHALL BE FULLY ADJUSTABLE.
 - .3SYSTEM SHALL OPERATE AS A MANUAL DOOR CLOSER IN EVENT OF POWER FAILURE.
 - .4HOLD OPEN TIME SHALL BE ADJUSTABLE FROM 0–60 SECONDS.
 - .5COMPLETE UNIT SHALL BE MOUNTED WITH PROVISIONS FOR EASY REPLACEMENT WITHOUT REMOVING DOOR FROM FRAME. DOOR CLOSER/OPERATOR SHALL HAVE CASE FULL WIDTH, COMPLETE WITH ON-OFF SWITCH.
 - .6PROVIDE ALL COMPONENTS REQUIRED FOR INTERACTION WITH ELECTRONIC STRIKE IF SCHEDULED.
 - .7PROVIDE FLUSH MOUNTED DOOR CONTROL SWITCHES, SINGLE CONTACT BUTTON, MINIMUM SIZE OF CONTACT BUTTON SHALL BE 4" DIAMETER ENGRAVED WITH INTERNATIONAL SYMBOL FOR ACCESSIBILITY.
 - .8PROVIDE ALL WIRING, CONTROLS AND ACCESSORIES FOR A COMPLETE INSTALLATION. ALL CONDUIT AND WIRE TO CLOSERS AND CONTROLS TO BE CONCEALED IN DOOR FRAMES. PROVIDE 120V AC, 1.5 AMP INPUT.
 - .9ACCEPTABLE PRODUCT:
 - .1 GYROTECH MODEL GT500;
 - .2 HORTON 4000LE

08 50 00 – PVC WINDOW AND GLAZING:

- 1. READ DRAWINGS IN CONJUNCTION WITH SPECIFICATIONS FOR FABRICATION, INSTALLATION AND OPERATION REQUIREMENTS
- 2. SUBMIT SHOP DRAWINGS FOR WINDOWS AND GLAZING.
 - 2.1. INDICATE MATERIALS AND DETAILS IN SCALE FULL SIZE FOR HEAD, JAMB AND SILL, PROFILES OF COMPONENTS, INTERIOR AND EXTERIOR TRIM JUNCTION BETWEEN COMBINATION UNITS ELEVATIONS OF UNIT, ANCHORAGE DETAILS, LOCATION OF ISOLATION COATING, DESCRIPTION OF RELATED COMPONENTS AND EXPOSED FINISHES FASTENERS, AND CAULKING. INDICATE LOCATION OF MANUFACTURER'S NAMEPLATES.
 - 2.2. SUBMIT TEST REPORTS FROM APPROVED INDEPENDENT TESTING LABORATORIES, CERTIFYING COMPLIANCE WITH SPECIFICATIONS, FOR: WINDOWS TO CSA A440-00.
- 3. SYSTEM DESIGN: DESIGN AND SIZE COMPONENTS TO WITHSTAND DEAD AND LIVE LOADS CAUSED BY PRESSURE AND SUCTION OF WIND ACTING NORMAL TO PLANE OF WINDOW AS MEASURED IN ACCORDANCE WITH ASTM E330 AS WELL AS NBC 2010
- 4. SYSTEM INTERNAL DRAINAGE: DRAIN INCIDENTAL WATER ENTERING JOINTS, CONDENSATION OCCURRING IN GLAZING CHANNELS, OR MIGRATING MOISTURE OCCURRING WITHIN SYSTEM, TO THE EXTERIOR BY A WEEP DRAINAGE NETWORK WITHIN THE HOLLOW TUBE MEMBERS
- 5. AIR AND VAPOUR SEAL: MAINTAIN CONTINUOUS AIR BARRIER AND VAPOUR RETARDER THROUGHOUT ASSEMBLY.
- 6. WINDOW INSTALLERS: AAMA REGISTERED WITH INSTALLATION MASTERS RECOGNIZED TRAINING PROGRAM.
- 7. WARRANTY:
 - 7.1. PROVIDE A FIVE (5) YEAR MANUFACTURER'S LIMITED WARRANTY ON VINYL (PVC) COMPONENTS FROM DATE OF MANUFACTURE AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP;
 - 7.2. PROVIDE FIVE (5) YEAR MANUFACTURER'S LIMITED WARRANTY FOR INSULATED GLASS UNITS FROM SEAL FAILURE, INTERPANE DUSTING OR MISTING, AND REPLACEMENT OF SAME.
- 8. MATERIALS: TO CAN/CSA A440 SUPPLEMENTED AS FOLLOWS:
 - 8.1. WINDOWS TO BE ENERGY STAR QUALIFIED FOR ZONE C IN SASKATCHEWAN
 - 8.2. ALL EXTERIOR WINDOWS BY SAME MANUFACTURER
 - 8.3. INSULATING GLASS UNITS: CAN/CGSB-12.8, CLEAR TRIPLE GLAZED, DUAL LOW-E ARGON GAS FILLED.
 - 8.4. FASTENERS: STAINLESS STEEL
 - 8.5. WHITE PVC EXTRUSION COLOURED
 - 8.6. FRAMES: TUBULAR PVC, NOMINAL 3–1/4 INCH DEEP PROFILE, (2–1/8 INCHES JAMB DEPTH) INTEGRAL ATTACHMENT FLANGE, SILLS SLOPED FOR POSITIVE WASH, INTERIOR APPLIED GLASS STOPS.
 - 8.7. INSECT SCREEN FRAME AT OPERABLE UNIT: ROLLED ALUMINUM, PRE-FINISHED FRAME OF RECTANGULAR SECTIONS; FIT WITH ADJUSTABLE LOCKING HARDWARE; NOMINAL SIZE SIMILAR TO OPERABLE UNIT. INSECT SCREENS: GLASS FIBRE MESH.
 - 8.8. OPERABLE SASH WEATHER STRIPPING: POLYPROPYLENE PILE AND THERMOPLASTIC ELASTOMER, PERMANENTLY RESILIENT, PROFILED TO EFFECT A CONTINUOUS TIGHT FITTING WEATHER SEAL.
 - 8.9. MULTI-POINT LOCKING LOCKING SYSTEM, C/W TRUTH TM ROTO GEAR HARDWARE.

09 00 00 – FINISHES

- 1. INSTALL ALL FINISHES AS PER MANUFACTURER'S RECOMMENDED INSTALLATION GUIDES.
- 2. REFER TO FINISH SCHEDULE FOR FINISH MATERIALS
- 3. PAINTING
 - 1. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE ARCHITECTURAL PAINTING SPECIFICATION MANUAL BY THE MASTER PAINTERS INSTITUTE (MPI)
- 2. CONTRACTOR MUST SUBMIT PAINT DRAW-DOWN SAMPLES FOR WRITTEN APPROVAL PRIOR TO COMMENCING PAINTING.
- 3. STANDARD OF ACCEPTANCE: NO VISIBLE DEFECTS FROM A DISTANCE OF 1M.

10 14 00 – SIGNAGE

- 1. INTERIOR SIGNAGE:
 - .1NOT IN CONTRACT (NIC).
- 2. EXTERIOR SIGNS:
 - .1EXTERIOR SIGNAGE TO BE UNDER SEPARATE CONTRACT. BUILDING FINISHES TO RUN BEHIND NOTED EXTERIOR SIGNAGE.

31 00 00 – EARTHWORK:

- 1. GEOTECHNICAL REPORT: NO GEOTECHNICAL REPORT IS AVAILABLE FOR THIS SITE.
- 2. EROSION AND SEDIMENTATION CONTROL:
 - 1. PREVENT THE LOSS OF SOIL FROM THE CONSTRUCTION SITE RESULTING FROM STORM WATER RUNOFF, WIND EROSION, AND CONSTRUCTION ACTIVITIES.
 - 2. PREVENT THE SEDIMENTATION OF STORM SEWERS AND RECEIVING WATERS.
 - 3. PREVENT AIR POLLUTION CAUSED BY DUST AND PARTICULATE MATTER.
 - 4. PROVIDE ADEQUATE MEASURES AND INSTALL ESC PRODUCTS IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS AS REQUIRED.
- 3. EXCAVATING, TRENCHING AND BACKFILLING:
 - 1. ENGAGE SERVICES OF QUALIFIED PROFESSIONAL ENGINEER WHO IS REGISTERED OR LICENSED IN PROVINCE OF SASKATCHEWAN, CANADA IN WHICH WORK IS TO BE CARRIED OUT TO DESIGN AND INSPECT SHORING, BRACING AND UNDERPINNING WHICH MAY BE REQUIRED FOR WORK
 - 2. PROTECT EXISTING FEATURES IN ACCORDANCE WITH SECTION 015600 – TEMPORARY BARRIERS AND ENCLOSURES AND APPLICABLE LOCAL REGULATIONS
 - 3. SIZE, DEPTH AND LOCATION OF EXISTING UTILITIES AND STRUCTURES AS INDICATED ARE FOR GUIDANCE ONLY. COMPLETENESS AND ACCURACY ARE NOT GUARANTEED
 - 4. PRIOR TO COMMENCING EXCAVATION WORK, NOTIFY APPLICABLE OWNER OR AUTHORITIES HAVING JURISDICTION, ESTABLISH LOCATION AND STATE OF USE OF BURIED UTILITIES AND STRUCTURES. OWNERS OR AUTHORITIES HAVING JURISDICTION TO CLEARLY MARK SUCH LOCATIONS TO PREVENT DISTURBANCE DURING WORK
 - 5. MAINTAIN AND PROTECT FROM DAMAGE, WATER, SEWER, GAS, ELECTRIC, TELEPHONE AND OTHER UTILITIES AND STRUCTURES ENCOUNTERED
 - 6. WHERE UTILITY LINES OR STRUCTURES EXIST IN AREA OF EXCAVATION, OBTAIN DIRECTION OF ENGINEER BEFORE REMOVING OR RE-ROUTING
 - 7. PROTECT EXISTING BUILDINGS AND SURFACE FEATURES FROM DAMAGE WHILE WORK IS IN PROGRESS. IN EVENT OF DAMAGE, IMMEDIATELY MAKE REPAIR TO APPROVAL OF ENGINEER
 - 8. CUT PAVEMENT OR SIDEWALK NEATLY ALONG LIMITS OF PROPOSED EXCAVATION IN ORDER THAT SURFACE MAY BREAK EVENLY AND CLEANLY
 - 9. ENGAGE SERVICES OF QUALIFIED PROFESSIONAL ENGINEER WHO IS REGISTERED OR LICENSED IN PROVINCE OF SASKATCHEWAN, CANADA IN WHICH WORK IS TO BE CARRIED OUT TO DESIGN AND INSPECT SHORING, BRACING AND UNDERPINNING REQUIRED FOR WORK.
- 10. USE FILL OF TYPES AS INDICATED OR SPECIFIED BELOW. COMPACTION DENSITIES ARE PERCENTAGES OF MAXIMUM DENSITIES OBTAINED FROM ASTM D698.
 - 1. EXTERIOR SIDE OF PERIMETER WALLS: USE TYPE 3 FILL TO SUBGRADE LEVEL. COMPACT TO 95%.
 - 2. WITHIN BUILDING AREA: USE TYPE 2 OR 3 TO UNDERSIDE OF BASE COURSE FOR FLOOR SLABS. COMPACT TO 95 %.
 - 3. UNDER CONCRETE SLABS: PROVIDE 150 MM COMPACTED THICKNESS BASE COURSE OF TYPE 2 OR 3 FILL TOPPED WITH VOIDFORM FILLER AS INDICATED TO UNDERSIDE OF SLAB. COMPACT BASE COURSE TO 97 %.
 - 4. RETAINING WALLS: USE TYPE 2 FILL TO SUBGRADE LEVEL ON HIGH SIDE FOR MINIMUM 500 MM FROM WALL AND COMPACT TO 95 %. FOR REMAINING PORTION, USE TYPE 3 FILL COMPACTED TO 95 %.
 - 5. PLACE UNSHRINKABLE FILL IN AREAS AS INDICATED.
 - 4. ROUGH GRADING
 - 1. PROTECT AND/OR TRANSPLANT EXISTING TREES, LANDSCAPING, NATURAL FEATURES, BENCH MARKS, SURFACE OR UNDERGROUND UTILITY LINES WHICH ARE TO REMAIN AS DIRECTED BY ENGINEER. IF DAMAGED, RESTORE TO ORIGINAL OR BETTER CONDITION UNLESS DIRECTED OTHERWISE
 - 2. ROUGH GRADE TO LEVELS, PROFILES, AND CONTOURS ALLOWING FOR SURFACE TREATMENT AS INDICATED.
 - 3. BRING SUBSOIL TO REQUIRED LEVELS, PROFILES AND CONTOURS INDICATED ON DRAWINGS. MAKE CHANGES IN GRADE NATURAL. BLEND SLOPES INTO LEVEL AREAS.
 - 4. SLOPE ROUGH GRADE AWAY FROM BUILDING MINIMUM 50 MM IN 3 M UNLESS INDICATED OTHERWISE ON DRAWINGS.
 - 5. GRADE DITCHES TO DEPTH AS INDICATED.
 - 6. PRIOR TO PLACING FILL OVER EXISTING GROUND, SCARIFY SURFACE TO DEPTH OF 150 MM. MAINTAIN FILL AND EXISTING SURFACE AT APPROXIMATELY SAME MOISTURE CONTENT TO FACILITATE BONDING.
 - 7. COMPACT FILLED AND DISTURBED AREAS TO MAXIMUM DRY DENSITY TO ASTM D698, AS FOLLOWS:
 - 1. [85]% UNDER LANDSCAPED AREAS.
 - 2. [95] % UNDER PAVED AND WALK AREAS.
 - 3. OR AS RECOMMENDED BY GEOTECHNICAL REPORT
 - 8. DO NOT DISTURB SOIL WITHIN BRANCH SPREAD OF TREES OR SHRUBS TO REMAIN.
 - 9. INSPECTION AND TESTING OF SOIL COMPACTION AS REQUIRED BY CONSULTANT

- 2. TOPSOIL PLACEMENT AND GRADING:
 - 1. TOPSOIL FOR SEEDED AREAS AND PLANTING BEDS: MIXTURE OF PARTICULATES, MICRO ORGANISMS AND ORGANIC MATTER WHICH PROVIDES SUITABLE MEDIUM FOR SUPPORTING INTENDED PLANT GROWTH.
 - 2. CONTRACTOR IS RESPONSIBLE FOR AMENDMENTS TO SUPPLY TOPSOIL.
 - 3. PRIOR TOPSOIL PLACEMENT VERIFY THAT GRADES ARE CORRECT. IF DISCREPANCIES OCCUR, NOTIFY CONSULTANT AND DO NOT COMMENCE WORK UNTIL INSTRUCTED BY CONSULTANT.
 - 4. GRADE TO ELIMINATE ROUGH SPOTS AND LOW AREAS AND ENSURE POSITIVE DRAINAGE. PREPARE LOOSE FRIABLE BED BY MEANS OF CULTIVATION AND SUBSEQUENT RAKING.
 - 5. CONSOLIDATE TOPSOIL TO REQUIRED BULK DENSITY USING EQUIPMENT APPROVED BY CONSULTANT. LEAVE SURFACES SMOOTH, UNIFORM AND FIRM AGAINST DEEP FOOTPRINTING.
 - 3. MECHANICAL SEEDING:
 - 1. PRODUCTS: CANADA "CERTIFIED" SEED, "CANADA NO. 1 LAWN GRASS MIXTURE" IN ACCORDANCE WITH GOVERNMENT OF CANADA "SEEDS ACT" AND "SEEDS REGULATIONS". HAVING MINIMUM GERMINATION OF 75% AND MINIMUM PURITY OF 97%
 - 2. FERTILIZER TO CANADA "FERTILIZERS ACT" AND "FERTILIZERS REGULATIONS"
 - 3. SEED BED PREPARATION: VERIFY GRADES ARE CORRECT AND TOPSOIL PLACEMENT IS COMPLETE.
 - 4. APPLY FERTILIZED AT LEAST 6 DAYS BEFORE SEEDING, SPREAD IT UNIFORMLY OVER ENTIRE AREA OF TOPSOIL AS INDICATED ON THE DRAWINGS.
 - 5. MAINTENANCE DURING ESTABLISHMENT PERIOD:
 - 1. WATER SEEDED AREA TO MAINTAIN OPTIMUM SOIL MOISTURE LEVEL FOR GERMINATION AND CONTINUED GROWTH OF GRASS. CONTROL WATERING TO PREVENT WASHOUTS.
 - 2. REPAIR AND RESEED DEAD OR BARE SPOTS TO ALLOW ESTABLISHMENT OF SEED PRIOR TO ACCEPTANCE.
 - 3. CUT GRASS TO 50 MM WHENEVER IT REACHES HEIGHT OF 70 MM. REMOVE CLIPPINGS WHICH WILL SMOTHER GRASS.
 - 4. FERTILIZE SEEDED AREAS AFTER FIRST CUTTING. SPREAD HALF OF REQUIRED AMOUNT OF FERTILIZER IN ONE DIRECTION AND REMAINDER AT RIGHT ANGLES AND WATER IN WELL.

32 00 00 – EXTERIOR IMPROVEMENTS:

- 1. CONCRETE WALKS, CURBS AND GUTTERS: COORDINATE WITH MUNICIPAL REQUIREMENTS FOR STANDARD SIDEWALKS, CURBS, AND GUTTERS.
 - 1. GRANULAR BASE:
 - .1 VERIFY ELEVATIONS OF SUB_GRADE.
 - .2 COMPACT SUB_GRADE TO 98% STANDARD PROCTOR DENSITY FOR A DEPTH OF AT LEAST 150 MM BELOW FINISHED SUB_GRADE FOR CONCRETE SIDEWALKS AND CURBS.
 - .3 REPALE ANY UNSUITABLE MATERIALS WITH PIT_RUN FILL AND RECOMPACT.
 - .4 ENSURE CATCH BASINS, MANHOLES, SERVICE BOXES, DRAINS, ETC. ARE FIRMLY AND PROPERLY SET TO FINAL LEVELS AND IN CORRECT LOCATIONS.

- .5 OBTAIN CONSULTANT'S APPROVAL OF SUBGRADE BEFORE PLACING GRANULAR BASE.
- .6 COMPACT GRANULAR BASE TO AT LEAST 95% OF MAXIMUM DENSITY TO ASTM D698.
- 2. CONCRETE:
 - 1. OBTAIN CONSULTANT'S APPROVAL OF GRANULAR BASE AND REINFORCING STEEL PRIOR TO PLACING CONCRETE.
 - .1 MINIMUM COMPRESSIVE STRENGTH: MINIMUM 32 MPA AT 28 DAYS
 - .2 MAXIMUM WATER/CEMENT RATIO: 0.45
 - .3 NOMINAL AGGREGATE SIZE: 20 – 25 MM
 - .4 SLMR RANGE: 30 – 70 MM
 - .5 AIR CONTENT RANGE: 6–8%
 - .6 MINIMUM CEMENT CONTENT: 3335 KG/M3

- 2. IMMEDIATELY AFTER FLOATING, GIVE SIDEWALK SURFACE UNIFORM BROOM FINISH TO PRODUCE REGULAR CORRUGATIONS NOT EXCEEDING 2 MM DEEP.
- 3. PROVIDE EDGING AS INDICATED WITH 10 MM RADIUS EDGING TOOL.
- 4. ENSURE FINISHED SURFACES DO NOT VARY FROM TRUE LINES, LEVELS OR GRADE BY MORE THAN 3 MM IN 3 M WHEN MEASURED WITH A STRAIGHT EDGE.
- 5. CONSTRUCT ALL CONCRETE WALKS, WHICH ARE NOT DETAILED WITH A MINIMUM LONGITUDINAL SLOPE OF 10 MM IN 1 M, WITH A CROSS SLOPE OF 10 MM IN 1 M.
- 3. REINFORCING STEEL: AS SPECIFIED IN SECTION 03 20 00.
 - MINIMUM REINFORCING UNLESS NOTED OTHERWISE FOR SIDEWALKS
- SLAB THICKNESS SIDEWALK REINFORCING
 - ≤6" 10M @ 12" EACH WAY BOTTOM
 - ≤7" 10M @ 9" EACH WAY BOTTOM
 - ≤8" 10M @ 8" EACH WAY BOTTOM
 - ≤9" 10M @ 7" EACH WAY BOTTOM
 - ≤10" 15M @ 12" EACH WAY BOTTOM
 - ≤12" 15M @ 12" EACH WAY BOTTOM
- 4. EXPANSION AND CONTRACTION JOINTS:
 - 1. INSTALL TOOLED TRANSVERSE CONTRACTION JOINTS AFTER FLOATING, WHEN CONCRETE IS STIFF, BUT STILL PLASTIC, AT INTERVALS OF 1.5 M.
 - 2. INSTALL EXPANSION JOINTS AT INTERVALS OF 3 M UNLESS INDICATED OTHERWISE.
 - 3. WHEN SIDEWALK IS ADJACENT TO CURB, MAKE JOINTS OF CURB, GUTTERS AND SIDEWALK COINCIDE.
 - 4. FIT JOINTS WITH FILLER OF REQUIRED PROFILES, SET PERPENDICULAR TO LONGITUDINAL AXIS OF WALKS, CURBS AND GUTTERS. RECESS 12 MM BELOW FINISHED CONCRETE SURFACE.
 - 5. ROUND ALL EDGES, INCLUDING EDGES OF DUMMY AND CONTROL JOINTS, WITH 10 MM RADIUS EDGING TOOL.
 - 6. WHERE PAVED SURFACES ARE ADJACENT TO WALKS, CONCRETE CURBS AND GUTTERS ARE TO BE INTEGRAL WITH WALKS. MAKE CONTROL JOINTS OF CURBS COINCIDE WITH WALK JOINTS. PROVIDE A DUMMY JOINT AT LINE BETWEEN WALKS AND CURBS.
 - 4. ISOLATION JOINTS:
 - 1. INSTALL ISOLATION JOINTS AROUND MANHOLES AND CATCH BASINS AND ALONG LENGTH ADJACENT TO CONCRETE CURBS, CANCH BASINS, BUILDINGS, OR PERMANENT STRUCTURE. 12 MM THICK ASPHALT IMPREGNATED FIBRE BOARD.
 - 2. SEAL ISOLATION JOINTS WITH SEALANT APPROVED BY CONSULTANT.
 - 5. FORMING
 - .1. CONSTRUCT WOOD OR METAL FORMS FOR UNSUPPORTED CONCRETE EDGES, TO PROVIDE STRAIGHT LINES AND SMOOTH, FLOWING CURVED LINES AS INDICATED AND IN ACCORDANCE WITH SECTION 03 10 00.
 - .2. LOCATE JOINT FILLER WHERE PAVING ABUTS CURBS, WALLS, AND OTHER VERTICAL SURFACES. JOINT FILLER SHALL BE FULL DEPTH OF CONCRETE SECTION.
 - .3. FORM WALKS, CURBS, GUTTERS TO TOWN OF FAIRVIEW STANDARDS AS A MINIMUM.
 - .4. MATCH, REPAIR AND PATCH EXISTING WORK.
 - .5. REINFORCE CONCRETE SIDEWALKS, CURBS AND GUTTERS AS INDICATED IN THE DRAWINGS.
 - 6. CONCRETE PLACING
 - .1. PLACE EXTERIOR WALKS AND SLABS WITH A MAXIMUM PANEL DIMENSION OF 4000 MM. JOINT SIDEWALK CURBS WHERE INTERSECTED BY THE SLAB JOINTS.
 - .2. DIVIDE EXTERIOR WALKS AND SLABS USING 35 MM DEEP_TOOLED JOINTS, AT A MAXIMUM SPACING OF 2000 MM.
 - .3. PROVIDE JOINTS IN CURBS AT A MAXIMUM SPACING OF 3000 MM.
 - .4. BROOM FINISH AND PROVIDE IDENTIFICATION TO TOWN STANDARDS.
 - .5. USE WINTER CONCRETING METHODS IN ACCORDANCE WITH CSA A23.L-04 SECTION 7.4.2.5 WHEN THE MEAN DAILY TEMPERATURE FALLS BELOW 50C. CONCRETE SHALL NOT BE CONSIDERED A SEASONAL DEFICIENCY AND SHALL BE INSTALLED WITH HEATING AND HOARDING AS PART OF THE CONTRACT.

- 6. BACKFILL
 - 1. ALLOW CONCRETE TO CURE FOR 7 DAYS PRIOR TO BACKFILLING.
 - 2. BACKFILL TO DESIGNATED ELEVATIONS WITH MATERIAL APPROVED BY CONSULTANT. COMPACT AND SHAPE TO REQUIRED CONTOURS AS INDICATED OR AS DIRECTED BY CONSULTANT.
 - 3. ALONG ALL WALK EDGES, AS SOON AS POSSIBLE AFTER THE REMOVAL OF FORMS, BACKFILL WITH APPROVED MATERIAL AND COMPACT TO 95% STANDARD PROCTOR DENSITY.
 - 4. WHERE LANDSCAPING OCCURS, LEAVE BACKFILLING 150 MM BELOW CONCRETE SURFACE TO ALLOW FOR TOPSOIL.

- 2. TOPSOIL PLACEMENT AND GRADING:
 - 1. TOPSOIL FOR SEEDED AREAS AND PLANTING BEDS: MIXTURE OF PARTICULATES, MICRO ORGANISMS AND ORGANIC MATTER WHICH PROVIDES SUITABLE MEDIUM FOR SUPPORTING INTENDED PLANT GROWTH.
 - 2. CONTRACTOR IS RESPONSIBLE FOR AMENDMENTS TO SUPPLY TOPSOIL.
 - 3. PRIOR TOPSOIL PLACEMENT VERIFY THAT GRADES ARE CORRECT. IF DISCREPANCIES OCCUR, NOTIFY CONSULTANT AND DO NOT COMMENCE WORK UNTIL INSTRUCTED BY CONSULTANT.
 - 4. GRADE TO ELIMINATE ROUGH SPOTS AND LOW AREAS AND ENSURE POSITIVE DRAINAGE. PREPARE LOOSE FRIABLE BED BY MEANS OF CULTIVATION AND SUBSEQUENT RAKING.
 - 5. CONSOLIDATE TOPSOIL TO REQUIRED BULK DENSITY USING EQUIPMENT APPROVED BY CONSULTANT. LEAVE SURFACES SMOOTH, UNIFORM AND FIRM AGAINST DEEP FOOTPRINTING.
 - 3. MECHANICAL SEEDING:
 - 1. PRODUCTS: CANADA "CERTIFIED" SEED, "CANADA NO. 1 LAWN GRASS MIXTURE" IN ACCORDANCE WITH GOVERNMENT OF CANADA "SEEDS ACT" AND "SEEDS REGULATIONS". HAVING MINIMUM GERMINATION OF 75% AND MINIMUM PURITY OF 97%
 - 2. FERTILIZER TO CANADA "FERTILIZERS ACT" AND "FERTILIZERS REGULATIONS"
 - 3. SEED BED PREPARATION: VERIFY GRADES ARE CORRECT AND TOPSOIL PLACEMENT IS COMPLETE.
 - 4. APPLY FERTILIZED AT LEAST 6 DAYS BEFORE SEEDING, SPREAD IT UNIFORMLY OVER ENTIRE AREA OF TOPSOIL AS INDICATED ON THE DRAWINGS.
 - 5. MAINTENANCE DURING ESTABLISHMENT PERIOD:
 - 1. WATER SEEDED AREA TO MAINTAIN OPTIMUM SOIL MOISTURE LEVEL FOR GERMINATION AND CONTINUED GROWTH OF GRASS. CONTROL WATERING TO PREVENT WASHOUTS.
 - 2. REPAIR AND RESEED DEAD OR BARE SPOTS TO ALLOW ESTABLISHMENT OF SEED PRIOR TO ACCEPTANCE.
 - 3. CUT GRASS TO 50 MM WHENEVER IT REACHES HEIGHT OF 70 MM. REMOVE CLIPPINGS WHICH WILL SMOTHER GRASS.
 - 4. FERTILIZE SEEDED AREAS AFTER FIRST CUTTING. SPREAD HALF OF REQUIRED AMOUNT OF FERTILIZER IN ONE DIRECTION AND REMAINDER AT RIGHT ANGLES AND WATER IN WELL.

- 5. CONTROL WEEDS BY MECHANICAL OR CHEMICAL MEANS UTILIZING ACCEPTABLE INTEGRATED PEST MANAGEMENT PRACTICES.
- 6. FINAL ACCEPTANCE:
 - 1. SEEDED AREAS WILL BE ACCEPTED BY CONSULTANT PROVIDED THAT:
 - 1. AREAS ARE UNIFORMLY ESTABLISHED AND TURF IS FREE OF RUDDY, ERODED, BARE OR DEAD SPOTS AND FREE OF WEEDS.
 - 2. AREAS HAVE BEEN CUT AT LEAST TWICE.
 - 3. AREAS HAVE BEEN FERTILIZED.
 - 2. AREAS SEEDED IN FALL WILL BE ACCEPTED IN FOLLOWING SPRING, ONE MONTH AFTER START OF GROWING SEASON PROVIDED ACCEPTANCE CONDITIONS ARE FULFILLED.
 - 7. MAINTENANCE DURING WARRANTY PERIOD: PERFORM OPERATIONS AS PER ESTABLISHMENT PERIOD FROM TIME OF ACCEPTANCE UNTIL END OF WARRANTY.

31 23 00 – EXCAVATION & BACK FILL

- 1. EXCAVATE AND PREPARE THE SITE AND BUILDING AREAS IN ACCORDANCE WITH THE STRUCTURAL DRAWINGS.
- 2. THE EXCAVATION FOR SLABS, FOOTINGS, PILE CAPS, BEAMS, AND WALLS SHALL BE CARRIED TO DEPTHS SHOWN ON THE DRAWINGS, OR AS REQUIRED BY THE GEOTECHNICAL CONSULTANT AND THE MATERIAL AT THOSE DEPTHS SHALL REMAIN UNDISTURBED. EXCAVATE AND REMOVE SOFT SPOTS WHERE DIRECTED BY THE CONSULTANT.
- 3. ALL SPACES EXCAVATED AND NOT OCCUPIED BY FOUNDATIONS AND OTHER PERMANENT WORK, SHALL BE BACK FILLED WITH APPROVED MATERIAL IN ACCORDANCE WITH COMPACTION REQUIREMENTS AS SET OUT IN THE SOILS REPORT. NO BACK FILL SHALL BE PLACED DURING FREEZING WEATHER OR IN PERIODS OF HEAVY RAIN. CARE SHALL BE EXERCISED SO THAT FINISHED CONCRETE MEMBERS ARE NOT DISTURBED, PUSHED OUT OF LINE OR CRACKED DURING BACK FILLING.
- 4. BACK FILL MATERIALS:
 - .1 UNDER SLAB BACK FILL – FREE-DRAINING GRANULAR MATERIAL COMPACTED AS RECOMMENDED BY THE STRUCTURAL CONSULTANT, THICKNESS AS RECOMMENDED BY STRUCTURAL CONSULTANT.
 - 5. TESTING:
 - .1 SAMPLES FOR TESTING OF COMPACTION AND DENSITY SHOULD BE TAKEN AT SUFFICIENT INTERVALS TO PROVIDE SPECIFIED COMPACTION. THE CONTRACTOR SHALL USE THE SERVICES OF THE SOILS CONSULTANT FOR TESTING, AND THE COST OF SUCH SERVICES WILL BE BORNE BY THE OWNER.
 - .2 THE RESULT OF TESTING MUST BE FORWARDED TO GEOTECHNICAL CONSULTANT FOR REVIEW.

MISCELLANEOUS

- TRENCH DRAIN TO BE AS PER POLY DRAIN ABT COMPLETE WITH PERFORATED HEEL PROOF COVER (2412.19). TRENCH TO BE MINIMUM 4" DEEP

VINYL WALL PANEL

- AS PER TRUSSCORE PVC LINER PANEL

DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS, DATUM & ELEVATIONS PRIOR TO COMMENCEMENT OF WORK. COPYRIGHT OF RBM ARCHITECTURE INC.

ISSUED FOR TENDER JAN 23, 2017

SEALS:

CLIENT: TOWN OF WYNYARD

CONSULTANTS:

R B M
a r c h i t e c t u r e
2235 Speers Avenue Saskatoon, SK S7N 3R6-262-2938
email: office@rbmarchitecture.com **704.1101-101 Street North Burlington, ON L7R 1A9
tel: 905.441.4294

PROJECT: WYNYARD RECYCLING DEPOT

DRAWING: SPECIFICATIONS

PROJECT No: 751-16 SHEET No: PLOT No: 1
DATE: JAN 23, 2017
DRAWN BY: N.D.
SCALE: AS INDICATED

A002